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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/849,229	05/07/2001	Sung Rong Jo	P0239/US/SH	8060

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McGuire Woods LLP
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McLean, VA 22102-3915

EXAMINER

BURCH, MELODY M

ART UNIT	PAPER NUMBER
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3683

DATE MAILED: 12/02/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/849,229

Applicant(s)

JO, SUNG RONG

Examiner

Melody M. Burch

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 07 May 2001.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 September 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the pin with an integrally formed two stepped diameter reducing portion wherein the diameter reducing portion is tapered as claimed in claim 4 and the pin having an integrally formed washer-shaped boss body portion and further comprising an integrally formed washer-shaped boss body portion (which is one of the alternatives of claim 16) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 2, 4, 6, 9, and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent 5988605 to Weisser et al. Weisser et al. show in figures 1 and 2 a gas opening/closing pin which opens and closes a gas inlet and outlet 19 formed in a pipe holder 16 which seals one end portion of a cylinder 4 and moves the position of a

piston 6 in the cylinder, wherein at least one recess 20 which opens the gas inlet and outlet is formed on the outer peripheral surface of the central portion of the gas opening/closing pin and an integrally formed two stepped diameter reducing portion shown in the area of d, 24, and 26 formed at an upper end of the opening/closing pin.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Weisser et al. in view of US Patent 3659573 to Bennett. Bennett teaches in col. 1 lines 17-18 the use of a metering pin made of metal. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the metering pin of Weisser et al. to have included a pin being made of metal, as taught by Bennett, in order to provide a means of helping to prevent wear or nicks depending on the structural integrity of the metal material and also depending on cost and manufacturing considerations.

6. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Weisser et al. in view of US Patent 4934749 to Folarin. Folarin teaches in col. 3 lines 30-33 the use of a metering pin being made of a non-metal. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the pin of

Weisser et al. to have included a pin made of a non-metal, as taught by Folarin, in order to provide a material more suitable to a molding process for forming an integral pin piece depending on cost and manufacturing requirements.

7. Claims 3, 8, 10-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weisser et al. in view of US Patent Re. 18,696 to Messier. Messier teaches in figure 4 the use of a pin having a streamline-shaped recess shown in the area of the line associated with element number 18. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the recess of Weisser et al. to have included a streamline-shaped, as taught by Messier, in order to provide improved fluid flow of over the outer surfaces of the recess.

8. Claims 3, 8, 10-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weisser et al. in view of US Patent 6129343 to Ecarnot. Ecarnot teaches in figure 3 the use of a gas metering member having a streamline-shaped recess 74. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the recess of Weisser et al. to have included a streamline-shaped, as taught by Ecarnot, in order to provide a means of controlling fluid flow.

9. Claims 10, 13, 14, 17, 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over DE-19853012 (using US Patent 6241316 to Jean et al. as an English equivalent) in view of Messier. DE-19853012 shows in figures 13 and 15 a gas opening/closing pin which opens and closes a gas inlet and outlet 142 formed in a pipe holder 140 which seals one end portion of a cylinder 144 and moves the position of a piston 80 in the cylinder, wherein at least one shown recess which opens the gas inlet

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and outlet is formed on the outer peripheral surface of the central portion of the gas opening/closing pin and one of an integrally formed washer shaped boss body portion 119f is formed at a lower end of the opening/closing pin and an integrally formed diameter reducing portion is formed at an upper end of the opening/closing pin. Messier teaches in figure 4 the use of a pin having a streamline-shaped recess shown in the area of the line associated with element number 18. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the recess of DE-19853012 to have included a streamline-shaped, as taught by Messier, in order to provide improved fluid flow of over the outer surfaces of the recess.

10. Claims 10, 13, 14, 17, 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over DE-19853012 in view of Ecarnot. DE-19853012 shows in figures 13 and 15 a gas opening/closing pin which opens and closes a gas inlet and outlet 142 formed in a pipe holder 140 which seals one end portion of a cylinder 144 and moves the position of a piston 80 in the cylinder, wherein at least one shown recess which opens the gas inlet and outlet is formed on the outer peripheral surface of the central portion of the gas opening/closing pin and one of an integrally formed washer shaped boss body portion 119f is formed at a lower end of the opening/closing pin and an integrally formed diameter reducing portion is formed at an upper end of the opening/closing pin. Ecarnot teaches in figure 3 the use of a gas metering member having a streamline-shaped recess 74. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the recess of

Weisser et al. to have included a streamline-shaped, as taught by Ecarnot, in order to provide a means of controlling fluid flow.

11. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Weisser et al. in view of DE-19853012. DE-19853012 teaches in figure 15 the use of an integrally formed washer 119f. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the pin of Weisser et al. to have included an integrally formed washer, as taught by DE-19853012, in order to provide an alternate pin stopper means.

Response to Arguments

12. Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection. Examiner notes, however, that Applicant's arguments regarding the streamlined recess are more specific than the claim language. The claim language does not recite the specific limitation of the streamlined recess specifically being "formed on one side of the central portion" as discussed in the remarks. Additionally, Applicant's assertion that a "streamlined" recess is one that is "formed on one side of the central portion" is not inaccurate based on Webster's Collegiate 10th Edition dictionary which simply defines streamlined as "contoured to reduce resistance to motion through a fluid". Examiner holds that the recess of Messier satisfies the well-known and accepted definition of "streamlined" as set forth in Webster's Dictionary since it is contoured. Examiner also notes that Messier reads on the claims even in light of Applicant's definition of "streamlined recess" since, in one perspective, the recessed area in the vicinity of the line associated with element number

18 in figure 4 of the Messier reference may be considered as a plurality of recesses wherein each recess is formed on one side of the central portion of the pin similar to figure 10 of the instant invention - except in the Messier reference, the recesses overlap.

Conclusion

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melody M. Burch whose telephone number is 703-306-4618. The examiner can normally be reached on Monday-Friday (7:30 AM-4:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Lavinder can be reached on 703-308-3421. The fax phone numbers

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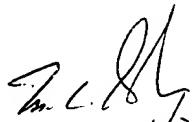
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for the organization where this application or proceeding is assigned are 703-305-7687 for regular communications and 703-305-7687 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1113.

mmb 11/26/02
mmb
November 26, 2002


11/26/02
**MATTHEW C. GRAHAM
PRIMARY EXAMINER
GROUP 310**